

Digital Electronics Course Information – September 2018

Mr. Zollner Room 10
914-257-5800 ext. 6855 or 6804
alan.zollner@henhudschools.org

Course	6028 DIGITAL ELECTRONICS (PLTW-DE) 5 periods per week (1.00 Credit / Weight 1.06)	
Textbook	Deuck & Reid, <i>Digital Electronics</i> , DELMAR Cengage Learning	
Description	Digital Electronics In Project Lead The Way (PLTW) Engineering, students engage in open-ended problem solving, learn and apply the engineering design process, and use the same industry-leading technology and software as are used in the world's top companies. This course offers an overview of topics in Digital Electronics.	
Major Topics	Foundations in Electronics	Intro to Electronics, Electricity, and Components Intro to Circuit Design: Analog, Digital, Applications
	Combinational Logic	And / Or / Inverter (AOI) Logic Design Universal Gates, Boolean Expressions, K-Mapping Common Combinational Logic Design, Intro to Programmable Logic Devices and Circuit Prototyping
	Sequential Logic	Sequential Logic Design, Flip-Flops & Applications, Synchronous and asynchronous counter design with Small and Medium scale integrated circuits.
	Controlling Real World Systems	Intro to State Machine Design, sensors, motors Intro to Microcontrollers & Microcomputers, Arduino
Final Exam	PLTW End of Course Exam, Local Course Exam	
Projects & Activities	This course is based predominantly on learning activities and projects. Students are expected to complete all activities and course projects on time. A limited number of assignments will have a 5-day grace period after the due date. Assignments submitted past the due date will be penalized for lateness.	
Grading - Approximate Weightings	A total points system will be used for calculating grades. Approximate weightings are as follows: Projects: 35% - 40% Activities: 35% - 40% Quizzes & Worksheets: 10% - 15% Tests: 5% - 10% Class Participation: 5% - 10%	

Homework	Students will need to spend significant amount of time at home and/or outside of regularly scheduled classes in order to complete activities and projects. Students should coordinate with me or another teacher in the Engineering Lab to schedule additional time as needed.
Supplies	Supplies required to have in class every day: • Engineering Notebook or spiral bound graphing notebook • 3-ring binder with dividers and loose leaf paper or spiral bound note paper. (Used for note and handouts). • The 3 ring binder must be used exclusively for the AE course. • Pen and pencil • Access to school computer account and school email.
Class Participation Expectations	Every student is an important member of our class learning community. All students are expected to consistently attend class prepared to learn, adhere to classroom rules, and actively engage in both independent and collaborative learning activities. The use of cell phones and other electronic distractions is not permitted in class, unless students receive specific permission to use their personal electronic devices as part of a learning activity.
Classroom Rules	1. Bring all supplies to class every day. 2. Be in your assigned seat when the bell rings. 3. Follow directions from the teacher the first time they are given. 4. Be respectful of yourself, your fellow students, your teacher, and your school. 5. Leave the room quietly when your teacher dismisses you.
Safety	It is essential that students adhere to all Safety instructions provided by the instructor, and conduct themselves in a responsible manner while in the engineering lab. Students must wear closed-toe shoes while in the Engineering Lab (no open-toe shoes please.)
Office hours	I am generally available for extra help Tue - Thurs after school until 3:15pm and by appointment in room 010 or 225.

PLEASE RETURN THIS PORTION TO YOUR INSTRUCTOR

I have read the attached course information for DIGITAL ELECTRONICS and have discussed these requirements and responsibilities with my parents/guardians.

(Student Signature)

I have read the attached course information for DIGITAL ELECTRONICS and have discussed these requirements and responsibilities with my son/daughter.

(Parent/Guardian Signature)

Is there any special information you think would be helpful for me to know regarding your son/daughter?